

Application No. 10/525,914
Paper Dated: July 15, 2009
In Reply to USPTO Correspondence of April 17, 2009
Attorney Docket No. 0388-050243

AMENDMENTS TO THE DRAWINGS

Replacement sheets for Figs. 1-7 are submitted herewith. These sheets, which include changes to all of Figs. 1-7, generally correct the cross-hatching in the sectional views to properly indicate the visible materials, in order to conform the drawings to standard United States patent practice. These amendments are discussed in greater detail in the Remarks herein.

Attachments: 5 Replacement Sheets

REMARKS

Claims 14-29 are pending, with claims 23-26 being cancelled herein, as claims 23-26 have been withdrawn from consideration. Presently, claims 14-22 and 27-29 stand rejected under 35 U.S.C. § 103(a) as being obvious over JP 2973249 to Nagayanagi Kogyo Kabushiki Kaisha ("Kaisha"). The Examiner has also objected to the drawings for failure to show the elastic and plastic materials in the cross-section views as described in the specification, and as set forth in the claims. Further, the Examiner has objected to the drawings for failure to comply with standard United States patent drawing conventions for proper cross-hatching indications of materials shown in sectional views.

I. Objections to the Drawings

Submitted herewith are replacement drawings for Figs. 1-7. In Figs. 1 and 4, the stippling for the perspective view of the core (1) has been removed. In Figs. 2, 3, 6, and 7, the cross-hatching of the core (1) has been changed to comply with the conventions set forth in MPEP § 608.02 for depicting sections of cork. In Fig. 5, the cross-hatching of the core (1) has been changed to comply with the conventions set forth in MPEP § 608.02 for depicting sections of synthetic resin. In Fig. 2, the cross-hatching of the washer seal (10) and the skin (2) have been changed to comply with the conventions set forth in MPEP § 608.02 for depicting sections of synthetic resin. In Fig. 3, 5, 6, and 7, the cross-hatching of the skin (2) and bonding layer (3) have been changed to comply with the conventions set forth in MPEP § 608.02 for depicting sections of synthetic resin. In Figs. 3 and 4, the cross-hatching of the polyethylene adhesive film (5) has been changed to comply with the conventions set forth in MPEP § 608.02 for depicting sections of synthetic resin.

No new matter is added by these amendments to the drawings. *See, e.g.*, specification at page 5, line 19 (the core may be "formed a synthetic resin having elasticity"); page 12, lines 5-6 (core may be made of "natural cork or compressed cork"); page 12, lines 12-23 (the skin and bonding layer may both be made of synthetic resins); page 12, lines 20-21 (the adhesive film may be made of polyethylene); and page 13, lines 17-18 (the washer may be made of synthetic resin). Further, the amendment to the specification made herein which indicates that the core shown in Fig. 5 is made of a synthetic resin also does not introduce new matter. *See, e.g.*, specification at page 5, line 19 (the core may be "formed of a synthetic resin having elasticity").

Applicants submit that the foregoing amendments to the drawings address and correct for all objections made by the Examiner, and that the objections to the drawings should be withdrawn.

II. Obviousness Rejections Over Kaisha

The Examiner has taken the position that Kaisha discloses the presently claimed invention except for the specific claimed materials, but that it would have been obvious to one having ordinary skill in the art to use any suitable material. Applicants respectfully disagree that the presently claimed invention is obvious over Kaisha.

Independent claim 14, now the sole independent claim, has been amended to clarify that "both the liquid-contact surface and the outer peripheral surface are coated with a skin." Claim 14 incorporates the further limitations that the bonding layer includes "a skin-side adhesion forming layer bonded to the skin" and "a core-side adhesion forming layer bonded to the liquid contact surface and the outer peripheral surface." Also, "the skin is bonded to the core by thermal fusion of the skin-side adhesion forming layer and the core-side adhesion forming layer." In connection with these amendments to claim 14, claim 16 has been amended with the limitation that the skin-side and core-side adhesion forming layers are "polyethylene bonding layers." These amendments find support in the specification at page 12 lines 19-23; page 13, lines 19-26; page 13, line 31 through page 14, line 6; and in Figs. 3 and 5.

A. Kaisha Fails to Teach or Suggest the Claimed Container Stopper Wherein "Both the Liquid-Contact Surface and the Outer Peripheral Surface are Coated with a Skin"

As clarified via the above amendments, the synthetic resin skin (2) of the present invention extends around both the liquid contact surface (F1) and the outer peripheral surface (F2). *See* Figs. 3 and 5; page 12, lines 16-18 of the present application. Having the skin (2) extend over both surfaces provides added protection against odor absorption when compared with the container stopper of Kaisha, in which the skin does not extend to cover the outer peripheral surface. *See* page 2, lines 11-25 of the present application. The claimed arrangement also "prevents adverse influences on the contents by entry of various smells from outside the container and absorption and adsorption of the flavor of the contents, as well as adverse influences of the core." Page 4, lines 16-19. Further, this arrangement has the additional advantage that "[e]ven where the content includes alcohol, alcohol barrier

characteristics of the polyester resin can prevent diffusion of core components to alcohol, to prevent a volume reduction of the core." Page 4, lines 19-22.

Kaisha discloses a container stopper construction wherein to a core material (4) (corresponding to the "core" of the present invention), a second synthetic resin membrane (8) made of polyethylene terephthalate resin (corresponding to the "skin" of the present invention) is bonded, by thermal fusion, via a first synthetic resin membrane (7) made of low-density polyethylene resin membrane (corresponding to the "bonding layer" of the present invention). The construction in Kaisha is a simple laminated assembly of laminating the first synthetic resin membrane (7) and the second synthetic resin membrane (8), in that order, onto the core material (4), each of the membranes (7, 8) being a single sheet-like element.

In Kaisha, only the liquid-contacting surface of the core material (4) is coated with the second synthetic resin membrane (8). *See* Figs. 10 and 12 and ¶ [0018] of Kaisha; *see also* page 2, lines 3-5 of the present application. Moreover, nothing in Kaisha teaches or suggests how one could create a stopper with the outer peripheral surface of the stopper also being covered by the film. Kaisha therefore fails to teach a container stopper wherein "both the liquid-contact surface and the outer peripheral surface [are] coated with a skin made of a synthetic resin," as is set forth in independent claim 14.

B. Kaisha Fails to Teach or Suggest the Claimed Container Stopper Wherein the "Bonding Layer Includes a Core-Side Adhesion Forming Layer Bonded to the Liquid-Contact Surface and the Outer Peripheral Surface and a Skin-Side Adhesion Forming Layer Bonded to the Skin"

The present invention, as set forth in independent claim 14, also involves bonding the skin to the core via a bonding layer. This has the advantage that "[e]ven if the core reduces in diameter when inserted into the opening of the container, the skin made of a polyester resin or a synthetic resin having a polyester resin as a main component thereof, follows the core to shrink alike, thereby avoiding 'creases,'" which can result in leaks. Page 4, lines 8-11. Because the bonding layer includes a core-side adhesion forming layer and a skin-side adhesion forming layer, and the skin is bonded to the liquid-contact surface and the outer peripheral surface of the core by thermal fusion of the core-side adhesion forming layer and skin-side adhesion forming layer, the skin is "firmly bonded all over the liquid-contact surface and outer peripheral surface of the core." Page 14, lines 7-13.

Kaisha also contains no teaching or suggestion of this feature of the present invention set forth in claim 14, namely that the "bonding layer includes a core-side adhesion forming layer bonded to the liquid-contact surface and the outer peripheral surface, and a skin-side adhesion forming layer bonded to the skin." As explained in the specification,

[a]s shown in FIG. 3, the bonding layer 3 mainly comprises a polyethylene layer, and the polyethylene layer includes a polyethylene adhesive film 5 and a polyethylene film 4 arranged in order from adjacent the core 1. A urethane adhesive 6 is interposed between the polyethylene film 4 and the skin 2 of polyethylene terephthalate.

Page 12 lines 19-23. By contrast, the bonding layer in Kaisha does not include the claimed core-side adhesion forming layer (e.g., polyethylene adhesive film (5)) and skin-side adhesion forming layer (e.g., polyethylene film (4)). Instead, Kaisha simply laminates the skin to the core via a single bonding layer (7). Kaisha is likewise silent as to the still further feature set forth in claim 14 that the "skin is bonded to the core by thermal fusion of the core-side adhesion forming layer and the skin-side adhesion forming layer."

In contrast with Kaisha, the container stopper of the present invention has a core and a skin, each bonded to its own adhesion forming layer (i.e. the core-side adhesion forming layer and the skin-side adhesion forming layer), resulting in superior overall bonding. The use of the two separate bonding layers results in the skin and core being bonded "reliably and firmly." Page 11, lines 15-16. Kaisha simply teaches nothing which would lead one to arrive at the construction of the container stopper according to the present invention, which includes the two separate adhesion forming layers set forth in claim 14.

For the reasons set forth above, Applicants submit that the subject matter of the currently amended claim 14 is non-obvious over Kaisha. Further, the subject matters of claims 15-22 and 27-29, which depend from claim 14, are likewise non-obvious over Kaisha for at least these same reasons.

- C. Kaisha Fails to Teach or Suggest the Claimed Container Stopper Wherein the "Skin is Bonded in a Stretched State to [the] Core and [the] Skin Remains in This Stretched State After its Bonding to the Core."

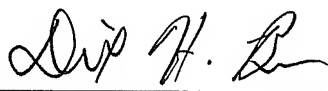
The Examiner has taken the position that claims 18 and 27-29 are product-by-process claims and do not structurally limit the final product.

Claims 18 and 27-29 have been currently amended to clarify that skin is not only bonded to the core in a stretched state, but also that "the skin maintains the stretched state after its bonding to the core." Page 6, line 18 – page 7, line 4. Because the skin remains in a stretched state after the container stopper has been formed, the skin is able to contract when the core shrinks, thereby preventing creases from forming. *See id.* Applicants submit that claims 18 and 27-29, as amended, positively recite the structure of the container stopper, and are therefore not product-by-process claims. Because Kaisha contains no disclosure of a skin being bonded to the core in a stretched state and remaining in a stretched state in the finished container stopper, claims 18 and 27-29 are patentable over Kaisha.

CONCLUSION

For the foregoing reasons, Applicants respectfully request that the objections to the drawings and the rejections to the claims be withdrawn, and all of pending claims 14-22 and 27-29 be allowed.

Respectfully submitted,
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